

CREATING TABLES IN AUTOCAD

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Annotation – *a significant amount of data in the modern information world can be presented in the form of a table to facilitate processing and work with this data. Therefore, creating documents containing tables has long been a routine task for those working with graphic computer programs. The article discusses one of the ways to create tables. The example of creating a list of elements shows how you can quickly and effortlessly create a table in AutoCAD. A step-by-step way to create such a table is given, settings, text input are described, and recommendations are given for inserting the table into the document. The material is well illustrated for better understanding.*

Keywords – *AutoCAD, table, cell, text.*

Describing the problem. Any graphic document – construction drawings or assembly drawings – can contain tables (information, specifications, etc.). That means that there is some database that needs to be written into the table.

So, the table represents an information object that forms a set of data requisites of the object. The functional dependence of the props can be depicted graphically in the form of lines with arrows, but it will be more appropriate to display them in tables.

A table is a special object in AutoCAD consisting of cells combined into rows and columns. Each cell can contain one-line or multi-line text or a graphic object (block). The table makes it possible not only to form images with grid lines and text filling in the drawing, but also to perform calculations based on the data in the cells of the table and information from the objects of the drawing itself.

Recent research analysis. The table is a complex object in which information is distributed by rows and columns [1]. Drawings often contain tabular data, such as specifications, parts lists, price lists, etc. [2, 3]. Creating tables is an integral part of the work of a design engineer. A simple and primitive way to create a table in AutoCAD involves drawing the table yourself using standard primitives (segments, polylines, etc.) [4].

However, such a routine manual approach does not always correspond to the modern busy rhythm of tasks. It can be tedious, and making changes can take a long time. To speed up the process, there is another way to create a table. At the same time, the drawing is not done using the usual commands of the Draw and Modify panels [5, 6], but in a different way, using only one command.

Aim of the work. As an example of the demonstration of the proposed method, we will create a table of the list of elements for the electrical schematic diagram.

Discussion (Main Part). In the Annotate tab, find the Table button, click on it, and the Insert Table window will pop up (Fig. 1). The default table style is Standard. If needed, you can create a different table style.

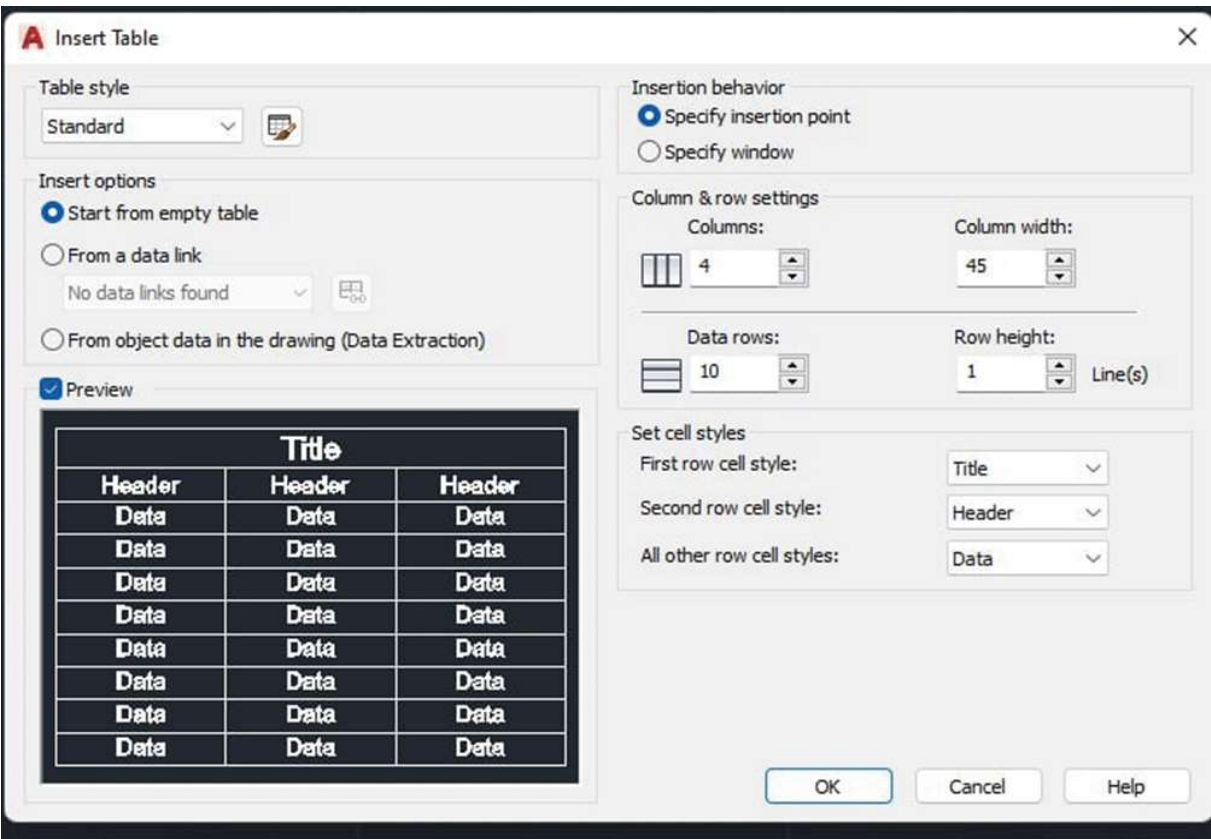


Fig. 1 – Insert Table Window

So, let's create a table. In the Column and row settings section, set 4 – the number of columns, in the Column width section – 45, Data rows – 10, Row height – 1. It should be noted here, the values are not in mm, but rather the number of lines of text. After that, click Ok and get the table (Fig. 2).

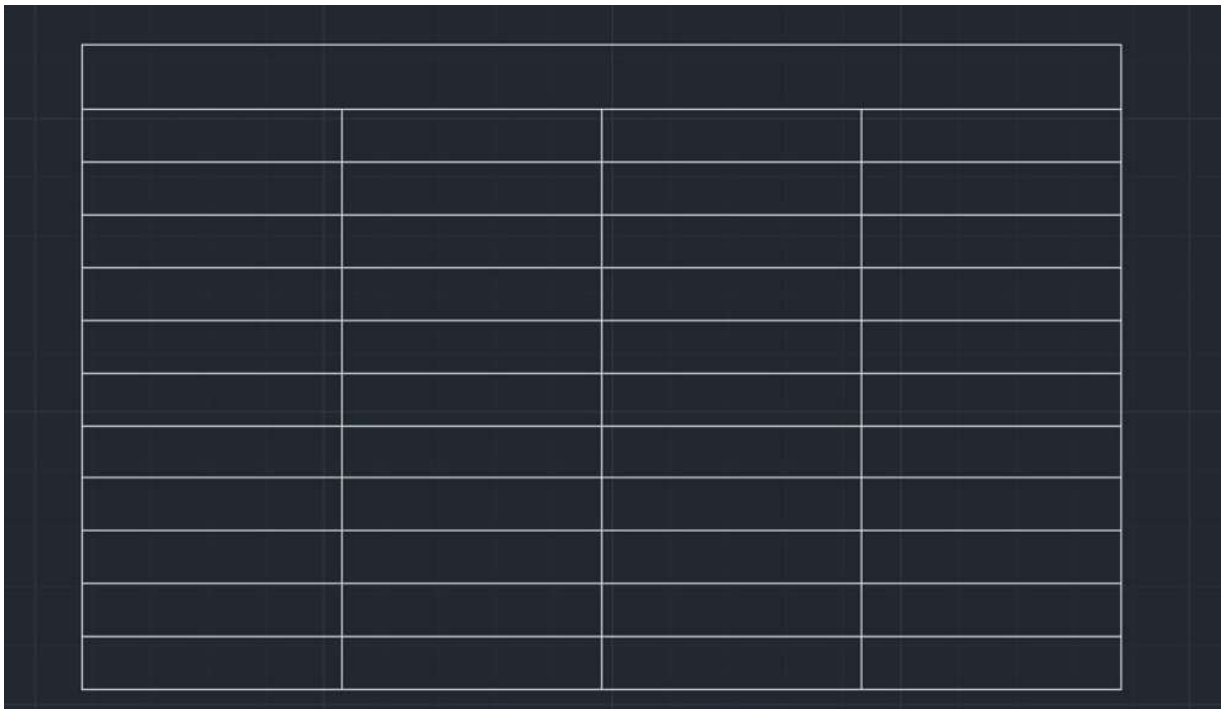
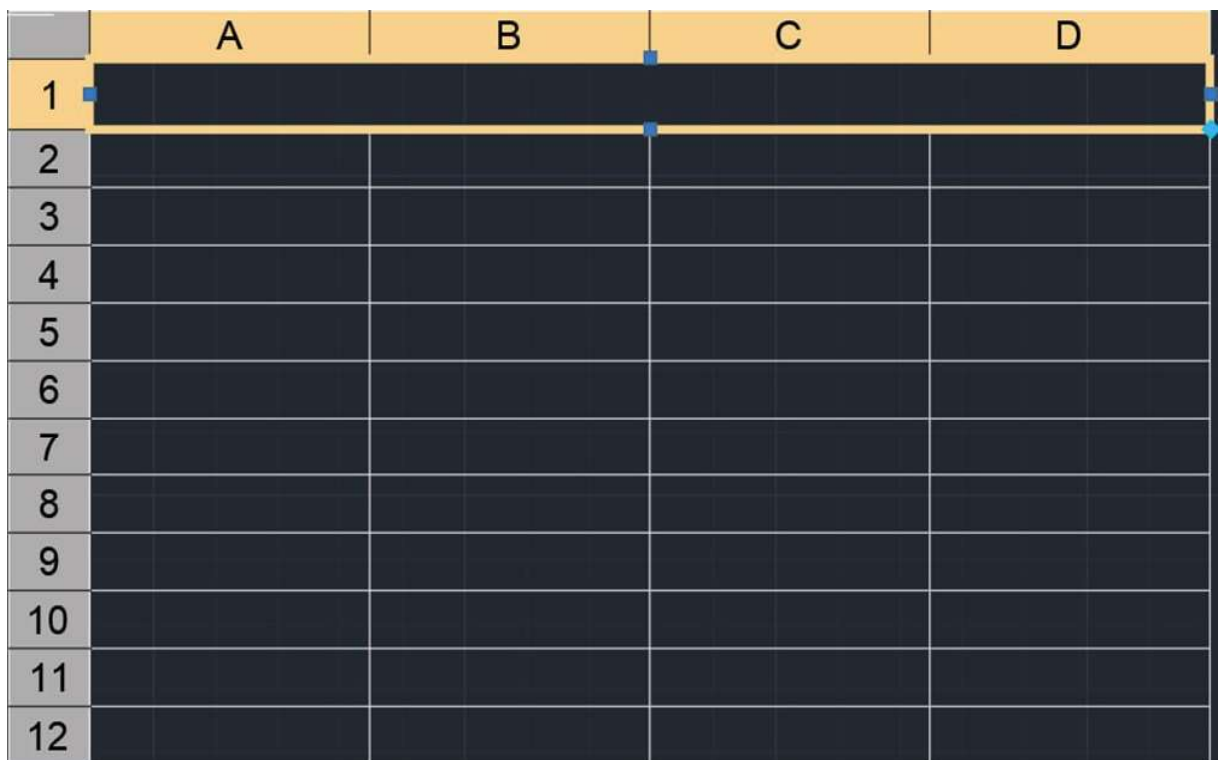


Fig. 2 – Table – the result of input settings

The next step is to fill the table with text. Move the cursor and click anywhere in the table. We get an image of the created list of elements (Fig. 3), where the letters A, B, C, D are the number of columns, and the numbers are the number of rows.



	A	B	C	D
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Fig. 3 – Columns and rows

Select line 1 – and text editing commands immediately appear on the ribbon (Fig. 4), where each cell is a multi-line text.

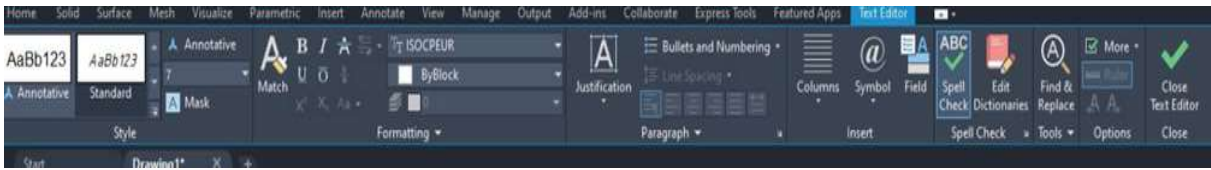


Fig. 4 – Commands for text editing

In the Text line, select Font Name ISOCPEUR, Oblique Angle – 15, Apply, Close. Next, double-click on the first line of the table and set the desired height of the text on the ribbon – 7. Enter the name "List of elements" (Fig. 5).

	A	B	C	D
1	<i>Перелік елементів</i>			
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Fig. 5 – Filling in first row of the table with text

To exit the table, you need to click the left mouse button anywhere in the field. To enter the table, click inside the cell of the table.

Enter the height of the text for the remaining cells. To do this, place the cursor in the far left corner of the table and drag it diagonally (Fig. 6).



Fig. 6 – Setting the height of the text in table

Click with the right mouse button – the Properties window opens (Fig. 7). Next, the Content window opens, where we select Text height – 5 (Fig. 8) and close the window afterwards.

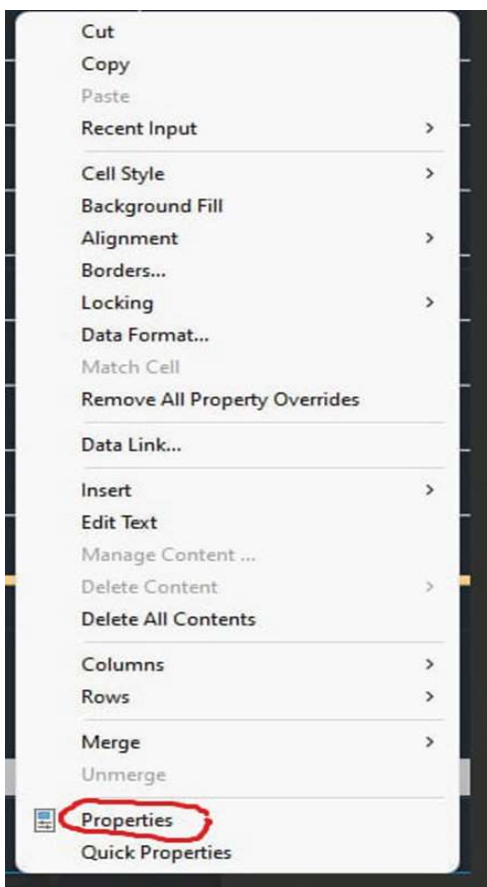


Fig. 7 – Properties Window

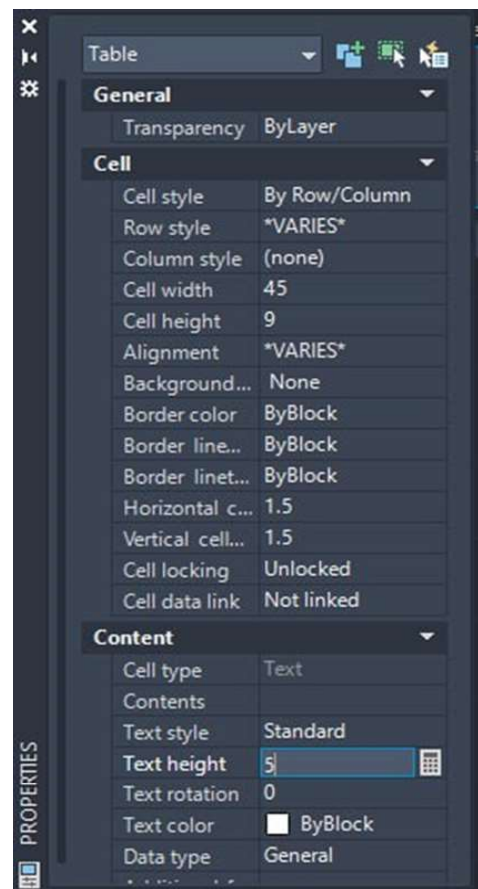


Fig. 8 – Content Window

Now we have a 5 mm text height. Double-click to activate the first cell in row 2 and enter the name of column A "Pos. late (Positional designation). Similarly, enter all column names of the list of elements (Fig. 9).

	A	B	C	D
1	Перелік елементів			
2	Поз. позн.	Найменування	Кільк.	Примітка
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Fig. 9 – Naming the columns

The table in its current form does not meet our requirements. Since at the beginning all columns were set to have the same width, now their size must be adjusted to the State Standard.

Let's start editing it. To do this, first select the first column (Fig. 10).

	A	B	C	D
1	Перелік елементів			
2	Поз. позн.	Найменування	Кільк.	Примітка
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				

Fig. 10 – Selecting the column for editing

The next step is to call Properties and set 20 in the Cell width line (Fig. 11). This will be the size of the first column – Positional. We will do the same with the other columns – Name, Quantity, Note.

To make a header for the list of elements with a size of 15 mm, select the entire line, after which the Properties window appears, then Content, Cell height – 15 (Fig. 12).

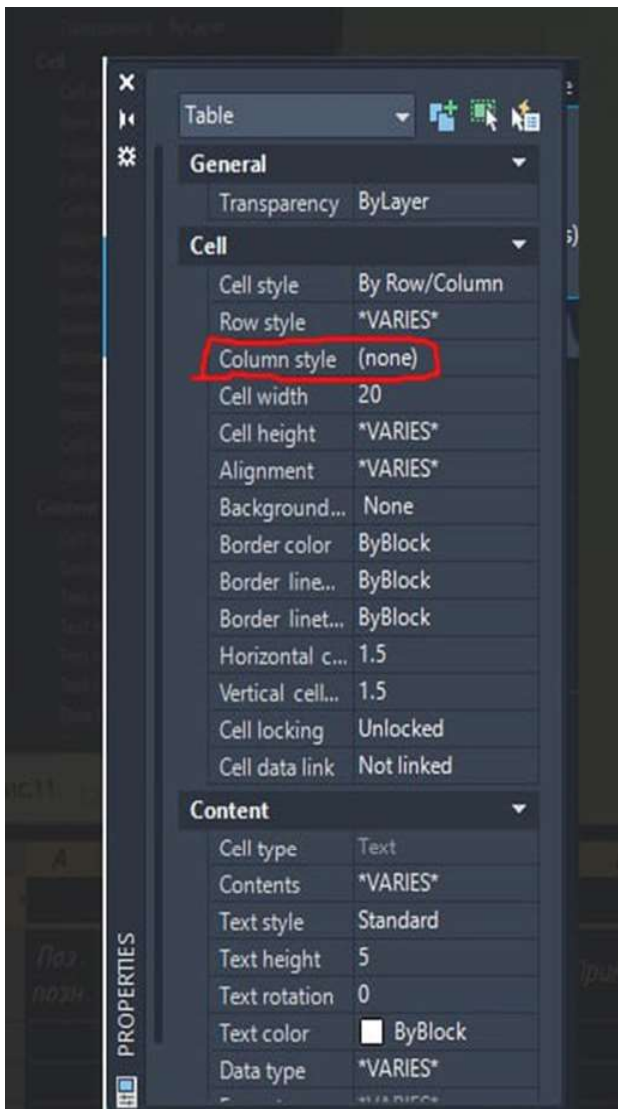


Fig. 11 – Specifying cell width

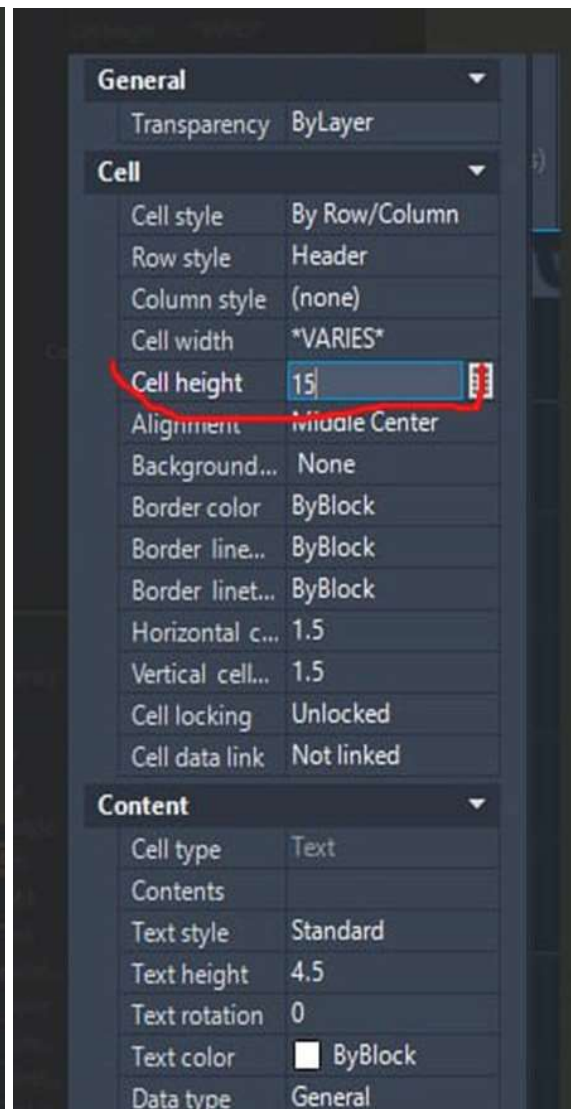


Fig. 12 – Cell height

Figure 13 shows the completed table of the elements list.

<i>Перелік елементів</i>			
<i>Поз. позн.</i>	<i>Найменування</i>	<i>Кільк.</i>	<i>Примітка</i>

Fig. 13 – Elements list table

You can insert an AutoCAD table graphically by specifying the insertion point in the workspace with the mouse, or by specifying the exact X, Y coordinates through the command line.

Conclusions. The given example of creating a table related to a list of elements. But information, explanations, specifications, etc., can also be executed in this way for draftsmen.

Using the method discussed above, you can create a table quickly and correctly, and at the same time automate the process as much as possible to speed up work.

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